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October 12, 2001

OUR FILE NO.
21166-00100-63

Magalie R. Salas, Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

Reference: WT Docket No. 01-146
RM-9966

Dear Ms. Salas:

Submitted herewith are an original and four (4) copies of the "Comments of AES Corporation" in the above-referenced rule making proceeding.

If further information is necessary, please communicate directly with this office.

Respectfully submitted,

AES CORPORATION

By: _____
Henry A. Solomon
Its Attorney

Enclosures
HAS/blr

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's Rules	)	WT Docket No. 01-146
And Policies for Applications and Licensing of Low	)	RM-9966
Power Operations in the Private Land Mobile	)	
Radio 450-470 MHz Band	)	

TO: The Commission

COMMENTS OF AES CORPORATION

AES Corporation ("AES"), by its attorneys, respectfully files its comments in the above-entitled proceeding. In support hereof the following is shown:

A. Identity and Interest.

AES is based in Peabody, Massachusetts. The company was founded in 1974 and is a leading manufacturer of security equipment and wireless data communications networks. AES security equipment is used around the world, operating in more than 130 countries. In order to meet the needs of customers in regions with little or no telephone service, AES has developed a new approach to long-range radio data communications to report alarms, to provide measurement data, packet messaging, and event reporting, and to facilitate many other small messaging services. This new operating system known as AES IntelliNet®, has captured alarm markets in the U.S. and around the world as the most effective wireless alarm communications system available. AES IntelliNet® is the fastest growing private two-way wireless security network in the U.S. IntelliNet's greatest potential rests in its ability to offer low cost data messaging.

AES holds a nationwide license for frequencies falling under the Class A Group.[1] Its system, which operates in a simplex mode (utilizing the same frequency for transmitting and receiving non-voice communications), sends and receives data, text, and other non-voice messages over the air inexpensively. The system is cheaper to build and operate than comparable alternatives such as cellular or wireline because every data transceiver is also a repeater and no towers are required. Hence, the system's low infrastructure costs coupled with its modest operating costs are especially attractive to small businesses and customers in the public sector.

AES's system has myriad applications. It allows federal, state and local government users to monitor water and sewage distribution systems; to track demand for energy at power sites; to track the operations of HVAC and other systems in schools, hospitals and other public buildings; to perform security checks of schools, offices, fire departments and storage facilities; to facilitate the use of home arrest monitoring devices. The system is designed for numerous other applications that save customers money, improve the operating efficiency of their businesses or other undertakings, promotes safety and efficiencies in the production and use of energy. [2]

Private enterprise makes similar use of the system. Thus lessors of copiers and other office equipment owners of vending machines, and natural gas exploration companies can, with the assurance of security, interrogate the IntelliNet® transceivers and gain instant information germane to their daily operations. The system also permits efficient tracking of vehicles and heavy equipment and allows farmers and ranchers to

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[1] AES is separately licensed to provide central station alarm service.

[2] Using wirelines to monitor certain facilities buried underground or remote fixed facilities such as oil pipelines is often difficult if not impossible. To achieve integration and control of this equipment data-only wireless is often the only foolproof way to effect communications and control.

control irrigation and drainage systems.[3] In short, AES's low power wireless facilities offer users a reliable, rapid, flexible, and economical two-way wireless communications capability. The need for two-way data communications for fixed and mobile applications is increasing daily. Consequently, the instant NPRM is of considerable interest to AES. AES is therefore pleased to take this opportunity to comment on several aspects of the NPRM and to offer a proposal of its own regarding the Class B Group channels.

B. Comments

I. Frequencies in the Class A Group Should Not be Limited to the Transmission of Voice Messages. The Current Primary-Secondary Classification Should be Retained.

Paragraph 18 of the NPRM asks whether Group A channels should continue to be designated primarily for voice operations with non-voice operations authorized on a secondary basis, or if non-voice operations should be limited to Group B spectrum. AES strongly favors the continuation of non-voice communications on a secondary basis on Group A channels. The Part 90 rule permitting such operations should not be changed.

From a spectrum utilization standpoint retention of the current primary-secondary channel use makes good sense. Wireless data messaging is bound to grow exponentially. Indeed, the industry generally acknowledges that within the next five years wireless data messaging traffic will eclipse voice by a ratio of three to one. Using Group A spectrum to provide secondary data operations is entirely consistent with the Commission's recognition that intensive and effective use of scarce spectrum serves the public interest goals underlying refarming.

There should be no concern that secondary operations would adversely affect primary service providers. Even though more intensive utilization of the Group A

[3] In many instances these tasks can be accomplished by activating the frequency for very brief period each

channels is a given, it is unlikely that secondary non-voice traffic will have any impact on primary voice communications. Unlike many voice transmitters, transceivers using IntelliNet® technology and similar equipment used by other data providers monitor the frequency before they transmit. Thus AES's units are activated if and only if the frequency is clear so as to prevent interference to other users. Accordingly, primary voice and secondary non-voice operations can continue to co-exist under the Group A umbrella, and AES recommends that the Commission make no changes to 47 C.F.R. §90.35 (c)(30).

II. AES Generally Supports the 10-Channel Set Aside for Group B Channel Pairs and Proposes that the Commission Authorize a Separate Class of Low Power Service Providers to Use the Channels on a Secondary Basis.

AES agrees with LMCC's proposal that the 10 Group B channels should be set aside for low power (2-watt TPO) non-voice use with formal coordination. As discussed previously, voice and data services can and do co-exist on same channels. Problems that have arisen in these circumstances often involve interference to not from non-voice transmissions. For the reasons just stated, data transmissions seldom if ever "step" on voice transmissions. The contrary is not the case. Many voice transmitters routinely interfere with non-voice as well as other voice messages. These transmitters are almost always "squelched off"; *i.e.*, equipped with a subcarrier tone squelch that prevents the operator from knowing that another operator with a different squelch frequency is using the channel. By dedicating a single channel block to non-voice communications the FCC is anticipating future needs for data communications that will not be subject to interference from voice operations. Providing a channel block for non-voice communications is good spectrum management, particularly where, as proposed in the

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day or at even greater intervals.

NPRM, licensees offering voice communications may have access to as many as 50 channels whereas the NPRM contemplates a set aside of 10 channels for data-only service.

While AES supports the FCC's Group B proposals, it welcomes this opportunity to propose what it regards as a constructive modification. Specifically, the Commission should modify the B Group limitations to authorize secondary use of those channels by providers of certain specialized non-voice services and not to require formal coordination.

There is a category of very low power devices currently operating on channels allocated in other Radio Services. Their transmitters have TPOs of .01 watt or greater but never above 2 watts. These very low power devices perform important functions such as controlling equipment, reading measurements and providing "exception notification." [4] They have a short range and in most instances an entire system is limited geographically to an area of a mile or two. The systems are made up of multiple mobile or portable transceivers, and the cycles are generally quite low. Indeed, in the case of exception notifications, there may be no transmissions for months or in some instances, a year or more.

Permitting the 10 Group B channels to be used on a secondary basis for the kinds of tasks mentioned above would serve the public interest by consolidating regulation under the Part 90 umbrella, and by maximizing the use of the Group B spectrum. Since the very low power units are incapable of wide-area coverage, they are unlikely to cause

[4] Exception notification is notice of an event that falls outside of normality. Examples of exception notifications would include electronic alerts that water level in a holding pond or reservoir has risen, that carbon monoxide concentrations are excessive, that a piece of equipment has failed or is about to fail, or that energy consumption has increased above a predetermined level.

interference to primary data operations. Accordingly AES requests the Commission to adopt its proposed modification.

III. AES Opposes What it Regards as "De Facto" Exclusivity; AES Supports the Concept of a "Duty Cycle."

Efficient spectrum use is an overriding objective of this rule making. Hence, the Commission is rightly concerned about whether to allow continuous data transmission on Group B spectrum. AES believes, and the NPRM tentatively concludes, that continuous transmission of data messages would be inconsistent with the FCC's spectrum use objective. The Commission should adopt a reasonable duty cycle so as to ensure that a single licensee with high traffic does not monopolize the shared channel. There are a number of ways to accomplish this objective provided that licensees sharing the channel deal with each other in good faith. The duty cycle should not be "set in stone", but should be subject to periodic review by users of the channel so as to accommodate individual changes in traffic. As high-speed digital transmissions increase and technology advances, this concern may well become moot. Meanwhile, the fact remains that digital transmitters are not yet omnipresent. Accordingly, a reasonable duty cycle or other brake on channel access is just and proper and should be adopted, perhaps with a five-year Sunset date.

IV. The Status of Existing Licensees.

In paragraph 32 the Commission seeks comments regarding the future status of certain licensees operating on the offset channels slated for low power operation or other incumbents that may be impacted if the Consensus Plan is adopted. Several options are offered in the NPRM including various alternatives involving grandfathering.

AES suggests that incumbents be permitted to remain in place so long as their continued operations do not interfere with Group B licensees operating under newly enacted low power rules. AES believes that this resolution is fair and just.

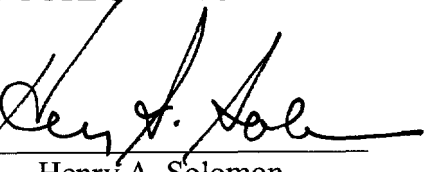
The Commission should not adopt a grandfathering scheme that requires displacement at the end of a license term or within a set period of time. Regulations providing for such are highly likely to cause affected licensees to defer plans for new investment in plant and equipment or decline to introduce new technological advances. Moreover, grandfathering until a date certain is likely to prompt waiver requests that will require the commitment of Commission staff and other resources for their disposition.

IV. Conclusion.

AES hopes these comments are helpful to the Commission and respectfully requests that they be given favorable consideration.

Respectfully submitted,

AES CORPORATION

By: 

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October 12, 2001